Remarks

Claims 1-5, 7 and 8 are pending in the application. The Applicant notes with appreciation the Examiner's entry of the Request for Continued Examination. Claim 1 has been rejected under 35 U.S.C. § 112, second paragraph, for lacking antecedent basis for the phrase "said subject." In light of the Examiner's helpful comments the Applicant has amended Claim 1 to provide "subject" with antecedent basis.

The Applicants have amended Claim 1 to change the phrase "portions of" to "a two dimensional section of" to indicate the type of digital image that is transmitted to a digital workstation.

§ 103 Rejections

Claims 1-5 and 7-8 stand rejected under 35 U.S.C. § 103(a) as being obvious over Collet-Billon et al. (U.S. Pat. No. 5,540,229) in view of Williams (U.S. Pat. No. 6,241,673). For the reasons set forth below, reconsideration and withdrawal of this ground of rejection is respectfully requested.

An exemplary embodiment of the present invention comprises a workstation 1 including a display 2, a central (processing) unit 3, a high definition digitalization card 4, videoconference means 5, three-dimensional position sensor 6, and an echographic probe 7. The workstation 1 is coupled to a communication network 8 for communicating with an expert at a remotely located diagnostic station (not shown).

In operation, the echographic probe 7 measures a sectional plane of a three-dimensional subject (e.g., patient) and generates a digital image therefrom. The three-dimensional position sensor 6 determines the position of the probe 7 with respect to the subject. The communication network 8 provides a mechanism for providing two dimensional sections of the digital image to

an expert at the remotely located diagnostic station for analysis in response to the expert's manipulation of a probe. The videoconference means 5 provides a mechanism for the expert to provide a real-time diagnosis to the patient.

The videoconference means is recited in claim 1 as a module for permitting the transfer of audio and visual content **between** the acquisition workstation and the diagnostic workstation. Therefore, the Applicant's claim an imaging system designed to facilitate interactivity **between** a subject at an acquisition station and an expert at a remote diagnostic station. Thus, the Applicant has clearly recited an interactive imaging system, as was suggested by the Examiner in the interview of July 9, 2003. Accordingly, the Applicant respectfully submits that nothing in Collet-Billion alone, or in combination with Williams teaches or suggest an imaging system that allows interactivity between an acquisition station and a remote diagnostic station.

Collet-Billon et al. teaches, in one exemplary embodiment, a system and method for viewing three-dimensional echographic data in the absence of a patient which includes a workstation 14 with a central processing unit 15, a monitor 16 and a memory 18 (see, col. 5, line 65 – col. 6, line 1). The memory 18 includes echographic data on a subject or subjects addressed in coordinate form (see, col. 6, lines 1-5). The workstation 14 is coupled to a three-dimensional sensor 22 and an emitter 23 which are used to determine the position of a sectional plane of a dummy 26 and display the corresponding data stored in the memory 18 on the monitor 16 (see col. 6, lines 18-58). Nothing in Collet-Billon discloses or suggests an interactive imaging system that allows a remotely located expert to diagnose and communicate with a subject located in real time.

The Office Actions asserts that "Collet-Billon further discloses (based on a broad reasonable interpretation) means for transmitting control data **between** said acquisition

workstation and said diagnostic workstation." [Emphasis added]. The Applicant submits, however, that the acquisition station [31] in Collet-Billon merely serves to transfer data **from** the acquisition station [31] to the diagnostic workstation [34]. Thus, the data in Collet-Billon is transferred in one direction. In contrast, the Applicant claims a "means for transmitting control data **between** said acquisition station and said diagnostic station." [Emphasis added]. Thus, the Applicant claims a means of permitting two-way real time diagnosis of a subject.

Further, Collet-Billon fails to disclose or suggest means for transmitting a "two dimensional" section of a digital image to a remote workstation in response to manipulation of a probe at the remote workstation as now recited in claim 1. Collet-Billon also fails to disclose a "remote workstation" as recited in claim 1.

The Examiner has indicated that "[a]s best understood by the Examiner, workstation 34 [of Collet-Billon] is disposed remotely from Dummy 56." However, the Applicant respectfully submits that a close study of Collet-Billon discloses only one workstation (14 in Fig. 2, 34 in Fig. 3) which is disposed in the same location as the dummy 26, 56. Fig. 3 of Collet-Billon teaches a host ultrasonic echograph 31, which is disposed in the same location as the workstation 34 (and coupled thereto by bus 43) and the dummy 56.

Collet-Billon is clearly silent as to the location of the diagnostic workstation 34. It is well settled that when a reference is silent about an asserted characteristic, the gap must be filled with recourse to extrinsic evidence that makes it clear that the missing descriptive matter is necessarily present in the thing described in the reference. See *Continental Can Co. USA v. Monsanto Co.* 20 USPQ2d 1746, 1749 (Fed. Cir. 1991). The Examiner must present evidence that the characteristic (e.g., the specific location of the diagnostic workstation 34) necessarily

flows from the teachings of Collet-Billon. *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).

The Applicant respectfully submits that Collet-Billon contains no teaching or suggestion that a diagnostic workstation may be disposed remotely from an acquisition workstation.

Furthermore, manipulation of the echographic probe 33 of Collet-Billon disposed at the echograph 31 does not operate to transmit a "two dimensional" section of any digital images created therefrom to the workstation 34. Therefore, Collet-Billon does not disclose or suggest a remotely located "diagnostic workstation" or a "means for transmitting a two dimensional section of a digital image" thereto in response to manipulation of a probe at the diagnostic workstation.

Turning to a consideration of Williams, it is asserted that Williams teaches "transmitting two-dimensional ultrasonic imagery to a remote location including transfer of audio and visual contents between an acquisition workstation and a diagnostic workstation." The Applicant respectfully traverses this assertion, and submits that nothing in Williams allows for communication **between** an acquisition station and a diagnostic workstation.

In particular, nothing in Williams teaches or suggests an imaging system that would allow the transfer of control data **between** an acquisition workstation and a diagnostic workstation. Williams only teaches the transfer of control data **from** an acquisition workstation to a diagnostic workstation.

Specifically, Williams discloses a user interface 150 (acquisition station) that collects data which is eventually relayed to a first wireless communication device 100, which then beams the ultrasound data to a second wireless communication device 200, which then relays the ultrasound data to a network hub 210 (a diagnostic workstation) which can relay that information

to such things as a VCR 25 or printer 260. Nothing however, indicates that the aforementioned system of Williams is suitable to transfer the control data back from the network hub 210 (diagnostic workstation) to the user interface 150 (acquisition station) in order to provide real time diagnostic evaluation from an expert located at the network hub 210 (diagnostic workstation).

Further, Williams does not disclose or suggest a "probe disposed at the diagnostic workstation, said diagnostic workstation disposed remotely from a subject." Williams teaches a probe (user interface 150) that is connected to the acquisition station (ultrasound system 110). Hence, the user interface 150 can not be disposed at a diagnostic workstation remotely from a subject.

In view of the foregoing, the Applicant respectfully submits that Williams, either alone or in combination with Collet-Billon, fails to teach or suggest an interactive imaging system. That is, the aforementioned references fail to teach "a means for expert [who is disposed remotely from a subject] assessment including a module for permitting the transfer of audio visual content between the acquisition workstation and the diagnostic workstation."

The Applicant respectfully submits that the current rejection is improperly based on hindsight reconstruction. It is axiomatic that the subject matter of claims may not be considered obvious as a result of a hypothetical combination of references unless something in the references suggests that an advantage may be derived from combining their teachings. The Court of Appeals for the Federal Circuit has decisively confirmed this point in its recent decision *In re Fritch*, 23 U.S.P.Q. 2d, 1780 (Fed. Cir. 1992). The CAFC has clearly established the following mandate regarding hypothetical combination of references:

> Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some

> teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined *only* if there is some suggestion or incentive to do so." Although couched in terms of combining teachings found in the prior art, the same inquiry must be carried out in the context of a purported obvious "modification" of the prior art. **The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.** Wilson and Hendrix fail to suggest any motivation for, or desirability of, the changes espoused by the Examiner and endorsed by the Board.
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> Here, the Examiner relied upon hindsight to arrive at the determination of obviousness. **It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious.** This court has previously stated that "[o]**ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.**" 23 U.S.P.Q. 2d at 1783-1784. [Emphasis added].

The foregoing discussion is binding with respect to this application. The language of the Court plainly establishes that in order to combine Collet-Billon with Williams it is necessary to establish that the references would have suggested their combination and modification. In particular, nothing in the aforementioned references suggests any desirability of modifying Collet-Billon or Williams to provide "interactivity" between a subject and an expert who is disposed remotely from the subject. As previously indicated, the diagnostic workstation of Collet-Billon is not remotely located from the acquisition workstation. There is no motivation in Williams to modify Collet-Billon to make it suitable for "remote interactivity." This is particularly true since nothing in Williams indicates that it is, in and of itself, suitable for "remote interactivity." In view of the foregoing, the Applicant respectfully requests withdrawal of the rejection of claims 1-5, and 7-8 as obvious under Collet-Billon in view of Williams.

The Applicant submits that the application is now in condition for allowance, which action is respectfully requested.

Respectfully submitted,

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